ABSTRACT

Procedures for SPICE parameter extraction, SPICE calculation, and device simulation for a partially depleted SOI MOSFET are provided. First, SPICE calculation parameters are set. At this time, parameters that describe the body current characteristics are not extracted but rather the body current is estimated to be zero. Then, in place of parameters that describe the body current characteristics, information regarding the steady state during circuit operation that is normally found from the body current characteristics, which is to say, the body charge and oscillation in the body potential, is treated as macro parameters that encompass information regarding the body current characteristics. After setting the parameters that include such macro parameters, a SPICE calculation for transient analysis is performed.